

# Vermiculite Attic Insulation

## Is it a health risk?

Recently, vermiculite has been in the news with reports of possible adverse health effects. Needless to say, many home owners are concerned. The purpose of This Bulldog® bulletin is to shed some light on the topic. This bulletin reflects what is known about the issue as of April 2004.

## What is Vermiculite?

Vermiculite is a mineral that exists in the earth. Vermiculite is mined to produce many different products. When heated to a high temperature, Vermiculite 'exfoliates' or pops like popcorn into lightweight pieces of material ideal for use as insulation. Pieces of Vermiculite are anywhere from a quarter inch to an inch in size with the quarter inch size being more typical. Vermiculite is shaped like little nuggets and may be silver, gold or brown in color.

Vermiculite is 'loose fill' insulation that comes in bags. The product is free-flowing and easy to pour into the many spaces that make up the attic framing. This was a popular do it yourself insulation material in its hey-day. Vermiculite was used in walls and attics but most commonly in accessible attics.

Many people call this insulation 'Zonolite'. Zonolite is a brand name. Most of the Vermiculite attic insulation produced up to the mid 1980's was sold under the brand name Zonolite.

## So what's the problem?

The largest supply of Vermiculite came from a mine near Libby Montana. The Libby mine also had natural asbestos deposits. Vermiculite from the Libby mine is contaminated with asbestos. It's the asbestos that's the problem not the Vermiculite. If you have Vermiculite insulation, there is no way to know if it came from the Libby mine but there is a very good chance that it did since most of the worlds supply came from that mine.

Authorities have know for some time that Vermiculite insulation from the Libby mine contained a small amount of asbestos (less than 1%) but it was thought that the percentage was so low that it did not pose a significant health risk. More recently, the same authorities are concerned because even if the bulk percentage of asbestos is very low, when disturbed, a concentrated 'cloud' of asbestos fibers could form. These are the very conditions we are concerned about with Vermiculite insulation in attics.

## What health problems can asbestos fibers cause?

If you breathe asbestos fibers into your lungs, the tiny asbestos fibers become trapped in the lungs. Frequent and prolonged exposure could lead to a lung disease called 'asbestosis' or to lung cancer. Asbestos is only a health concern if it can get into the air and subsequently into your lungs. Asbestos in Vermiculite insulation can very easily become airborne if disturbed.

## What should you do if you have Vermiculite insulation?

First of all it is reasonable to assume that the Vermiculite in any attic is the asbestos containing kind. You could have it tested but there are problems with the testing procedure. Even for a trained expert it is very difficult to test the material reliably.

There is no risk if you do not disturb the insulation. It's only when the insulation is disturbed that the tiny asbestos fibers are released into the air. Authorities agree that the best course of action is to leave it alone.

*Here are a few tips:*

- *Avoid going into your attic – don't use it as a storage area.*
- *If you do go in, make every effort not to disturb the insulation.*

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- If you must disturb the insulation, leave the attic immediately after disturbing the insulation.
- A dust mask will **NOT** protect you.
- Seal any openings to the attic such as around recessed light fixtures where insulation could fall through and into the home.

## Renovations and remodeling

It is possible that the insulation will have to be disturbed when renovating or remodeling. Anything from rewiring the ceiling light fixtures to installing a skylight could disturb the insulation substantially, causing asbestos fibers to get into the home. In this case, a certified asbestos contractor should be hired to remove the insulation. This is not a do it yourself project.

## How do you know if you have Vermiculite insulation?

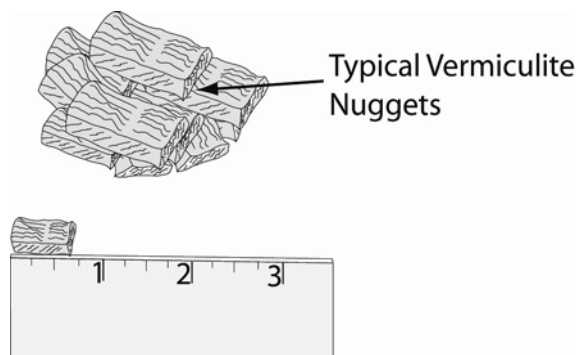
Vermiculite was used to insulate attics from roughly 1925 to about 1985. It was primarily used as a retrofit insulation for older homes. The bottom line is, if you have an older home you could have vermiculite insulation.

*Diagram 1* is vermiculite. The 'nuggets' are like no other kind of insulation.

The Vermiculite could be underneath a layer of modern fiberglass insulation. Vermiculite was commonly poured into the spaces between the ceiling joists (*Diagram 2*), level with the top of the joists. This was often only 4 inches at best. The insulation may have been upgraded again by adding fiberglass bats on top of the 4 inches of Vermiculite.

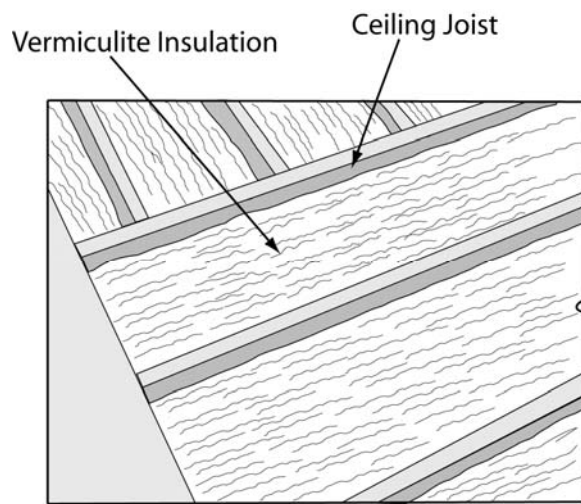
## Is Vermiculite still on the market?

Vermiculite insulation is still available on the market. Anything produced after 1990 will not be from the Libby mine. Vermiculite from other sources does not contain asbestos. Only the Vermiculite from the Libby mine contained asbestos.



*Diagram 1*

*Vermiculite Nuggets*



*Diagram 2*

*Vermiculite in Attic*